

REMARKS

Claims 17, 18, 22, 24 and 32 are pending in this application. By this Amendment, claims 17 and 22 are amended, claims 19-21, 23 and 25-31 are canceled, and claim 32 is added. No new matter is added. Reconsideration in view of the foregoing amendments and following remarks is respectfully requested.

A. The Office rejects claims 17-20, 22-26 and 28-31 under 35 U.S.C. §103(a) over JP 10027854 to Nagashima et al. (Nagashima). This rejection is respectfully traversed.

The rejection of claims 19-20, 23, 25-26 and 28-31 is moot, since these claims are canceled by this Amendment.

Claim 17 is amended and recites, *inter alia*, that a transition film silicide is in direct contact with the germanium film. This feature is shown in Fig. 3 and described in the specification at, for example, page 11, line 21-page 13, line 19. An advantage is that a p-n junction is prevented from being generated in the gate electrode, as described in the specification at, for example, page 12, line 16-page 13, line 10.

Nagashima, on the other hand, does not teach or suggest that a transition metal silicide is in direct contact with a germanium film. In addition, Nagashima does not recognize the advantage of this feature.

In addition, the Office Action admits that Nagashima does not teach or suggest that a range of concentration of p-type impurities is about 10^{17} to 10^{20} cm⁻³ but asserts that it would have been obvious to one having ordinary skill in the art at the time the invention was made to optimize the p-type impurity concentration in the germanium layer, since discovering the optimum or workable ranges involves only routine skill in the art. Applicants respectfully disagree.

Applicants respectfully submit that Nagashima does not recognize, disclose or suggest the claimed range. The Examiner has not demonstrated that the prior art teaches or suggests

this feature to be a result-effective variable. Accordingly to MPEP §2144.05(II)(B) entitled "Only Result-Effective Variables Can Be Optimized," a particular parameter must first be recognized as a result-effective variable, i.e., a variable which achieves a recognized result, before the determination of the optimum or workable ranges of the variable might be characterized as routine experimentation. The parameter optimized was not recognized to be result-effective variable, it is an exception that the claimed invention is not obvious from the prior art. In re Antonie, 559 F.2d 618, 195 USPQ 6 (CCPA 1977). In addition, obvious to try is not the standard of 35 U.S.C. §103. In re Tomlinson, 53 CCPA 1421, 363 F.2d 928, 150 USPQ623 (1996).

Because the prior art does not recognize this positively recited claim feature as a result effective variable, the claimed invention is not obvious in view of routine experimentation.

As such, Applicants respectfully submit that claim 17 is patentably distinct from the applied prior art.

Independent claim 22 recites features similar to those of claim 17. In addition, claim 22 recites that a silicon film is on the insulation film and that a gate insulation film is on the silicon film. These features are shown in Figs. 3 and 7.

Nagashima, on the other hand, as mentioned above fails to teach or suggest placing a transition metal silicide in direct contact with the germanium film. Additionally, in Nagashima, the silicon film (10) is not formed on an insulation film. Accordingly, claim 22 is patentably distinct from the applied prior art.

Claims 18 and 24 are allowable for at least their dependence on allowable base claims.

At least for the reasons described above, Applicants respectfully request withdrawal of this rejection.

B. The Office Action rejects claims 21 and 27 under 35 U.S.C. §103 over Nagashima in view of Semiconductor Manufacturing Technology (2001) to Quirk et al.


(Quirk). This rejection is moot, since claims 21 and 27 are canceled by this Amendment. Moreover, as asserted in Applicants' prior response, Quirk is not prior art to this application. As such, withdrawal of this rejection is respectfully requested.

C. Claim 32 is added by this Amendment and recites that the p-type impurities are built into a channel region, a range of concentration of the p-type impurities is 10^{16} to 10^{17}cm^{-3} , and that a resistance of the substrate is 14 to 22 Ω/cm . These features are shown in Fig. 2 and the descriptions thereof. Claim 32 depends from claim 17 and is therefore allowable at least for its dependence on claim 17.

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 17, 18, 22, 24 and 32 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,


James A. Oliff
Registration No. 27,075

Stephen P. Catlin
Registration No. 36,101

JAO:SPC/kzb

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OLIFF & BERRIDGE, PLC
P.O. Box 19928
Alexandria, Virginia 22320
Telephone: (703) 836-6400

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